

Keysight Wafer Prober Plugin

This document contains latest information on the Keysight Wafer Prober Plugin.

The Wafer Prober plugin is a set of tools and test steps to simplify the test automation of integrated photonics devices by handling the interface to the Formfactor semi-automated probe station and Formfactor Velox and Silicon Photonics Tools software.

Related Documents

For detailed information, refer to the following document for this application:

- “WaferTestAutomationHelp.pdf” or “WaferTestAutomationHelp.chm”. These documents can be found at the following location after you install the plugin:
C:\Program Files\ Keysight\TAP8
- The PathWave Test Automation (TAP) documents are also available at the above location. Alternatively, you can also visit www.keysight.com/find/TAP to find the additional and latest versions of TAP help documents.

System Requirements

The following table lists the supported hardware and software for the Wafer Prober plugin.

Released Date:	April 7, 2020
Operating System:	Microsoft Windows 7 Microsoft Windows 8 Microsoft Windows 10
Wafer Prober Hardware:	FormFactor CM300xi
Software Pre-requisites:	FormFactor Velox v2.5.x FormFactor SiPh-Tools v2.0.x Keysight PathWave Test Automation (TAP) version 8.8.78
File Name:	WaferProber.1.0.5.TapPackage

Installation Steps

To install the Wafer Prober plugin, perform the following steps:

1. Review the [System Requirements](#) for this application.
2. Ensure that licensed versions of Velox and SiPh-Tools software are installed.
3. Download and install PathWave Test Automation (TAP) software from <http://www.keysight.com/find/TAP> (if not already done).
4. Locate the Wafer Prober plugin on [Keysight website](#).
5. Download and double-click the TapPackage file for the Wafer Prober plugin to install it.

Note: The PathWave Test Automation and the Wafer Prober plugin can be installed on either the same or a different PC from the one that has Velox and SiPh-Tools installed on it. In case the Wafer Prober plugin and Velox + SiPh-Tools run on separate PCs, these must be in the same network / subnet since the Velox communication interface is network-based (TCP/IP port).

Note: Ensure that the Package Manager is not running when you install the plugin.

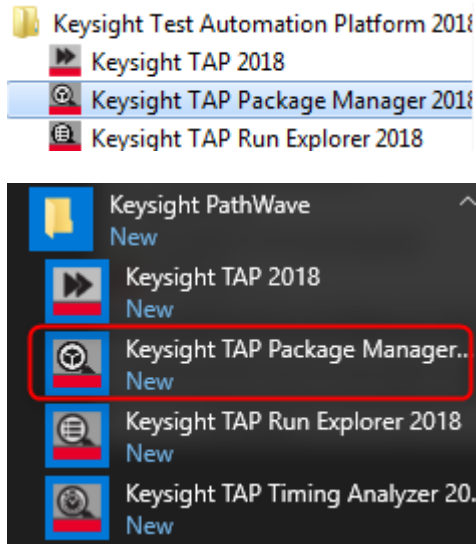
Note: The package (plugin installer file) file must be present on a local drive. Trying to install the plugin from a network share might indicate success, but actually the installation might not be successful.

6. Follow your company's procedure to get the license for using the PathWave Test Automation and the following license for using the Wafer Prober plugin from Keysight.
 - N7700210C
7. Install the required licenses via the Keysight License Manager. See [Licensing Wafer Prober Plugin](#) for more information.

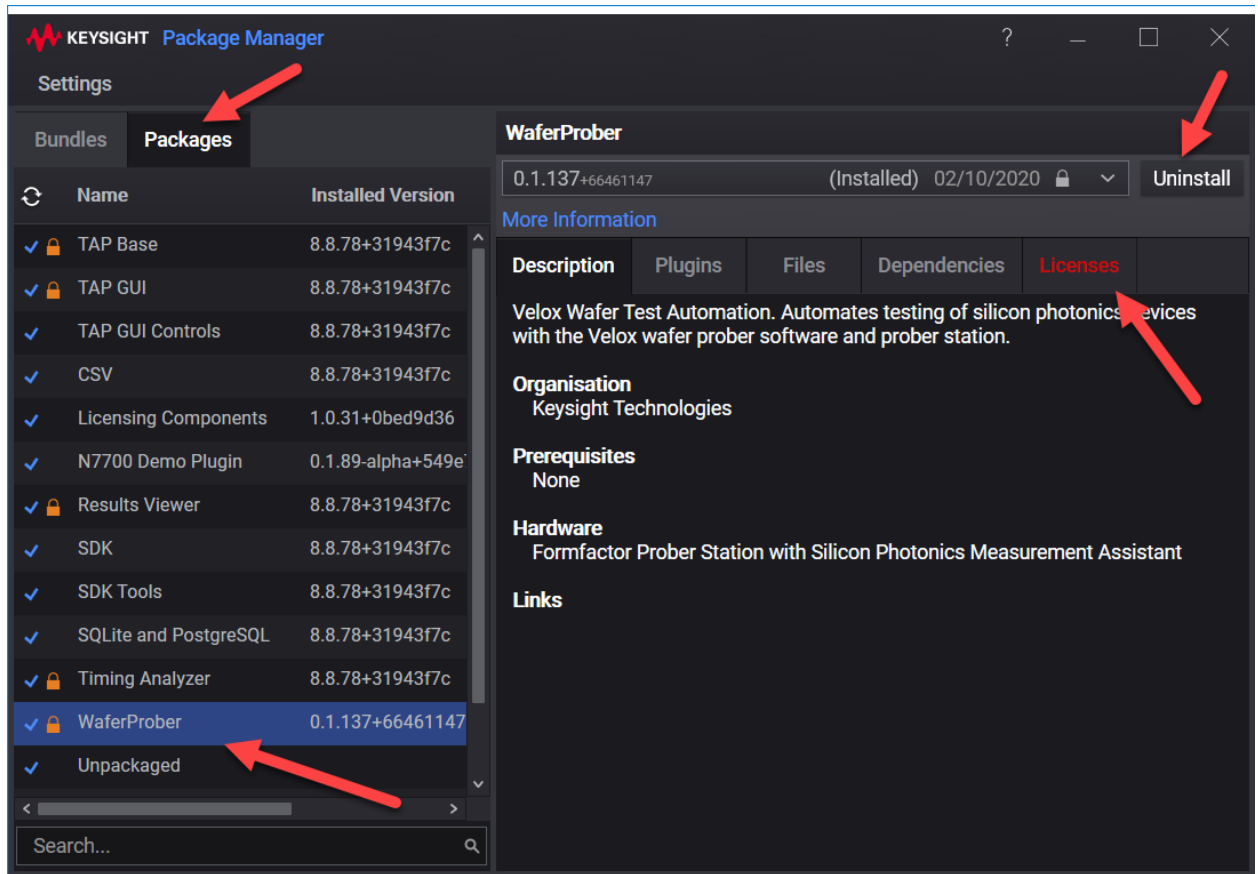
Verifying the Installation

To check the availability of the installed plugin, perform the following steps:

1. Open the **TAP Package Manager** from Windows Start menu.



2. Click the **Packages** tab to view the list of available plugins. The following image shows the **Wafer Prober Plugin** listed under the Packages tab.



Note: The **Installed Version** of the plugin on your machine might vary from what is displayed in the image above.

3. To view the information related to the required licenses and their installation status, click the **Licenses** tab in the right pane.
4. To uninstall the Wafer Prober plugin, select it and click **Uninstall** in the right pane.

Licensing Wafer Prober Plugin

The Wafer Prober plugin works with the following four license types:

- Node-locked – License can be used on one specified computer.
- Transportable – License can be used on one computer at a time but may be transferred to another using Keysight Software Manager (internet connection required)
- USB Portable – License can be used on one computer at a time but may be transferred to another using a certified USB dongle (available for additional purchase with Keysight part number E8900-D10)

- Floating – Networked computers can access a license from a server one at a time. Multiple licenses can be purchased for concurrent usage.

The licenses can either be perpetual or time-based. While perpetual licenses can be used indefinitely, time-based licenses can be used through the term of the license only (6, 12, 24, or 36 months).

For more information about the license types, terms, and support model, contact Keysight technical support.

You can install and manage the required licenses for the Wafer Prober plugin using Keysight license management applications, i.e.:

- Keysight License Manager 5
- Keysight License Manager 6

These applications provide you a visual representation of the licenses installed on your systems. Refer to the following table to understand when to use Keysight License Manager 5 and Keysight License Manager 6.

	Node-locked	Transportable	USB Portable	Floating
Keysight License Manager 5	Yes	Yes	No	No
Keysight License Manager 6	No	No	Yes	Yes

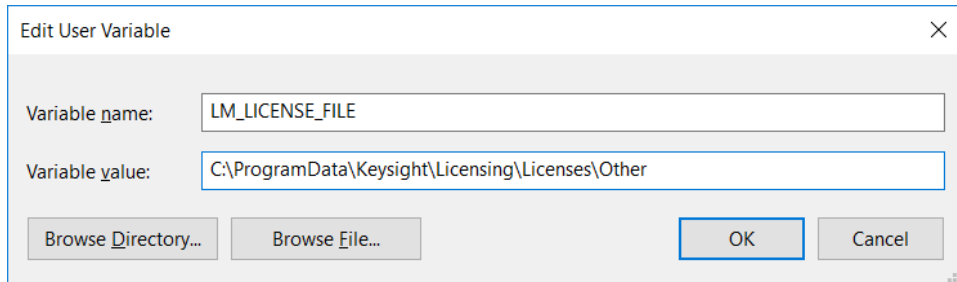
For detailed information on Keysight License Manager, refer to the Keysight License Manager Help. You can access the Keysight License Manager Help from the Keysight License Manager web page: <http://www.keysight.com/find/LicenseManager>

A special note on installing USB Portable licenses...

Perform the following steps to install USB-portable licenses:

1. Install the WibuKey driver on the PC on which the plugin is to be installed from <https://www.keysight.com/main/software.jsp?ckey=2977292&lc=ger&cc=DE&nid=-11143.0.00&id=2977292>
2. Install the redeemed USB license by adding the file in Keysight License Manager 6. Refer to the License Manager 6 documentation, if required.

3. Add the following environmental variable (or add the shown path to the existing list with semicolon separator):
 - Variable: LM_LICENSE_FILE
 - Value: C:\ProgramData\Keysight\Licensing\Licenses\Other



Getting Started with the Wafer Prober Plugin

Using the Wafer Prober plugin involves the following steps:

1. Start PathWave Test Automation.
2. Set up communication with Velox by adding an instrument.
3. Create a new wafer data structure and add data to it.
4. Initialize SiPh-Tools slave mode to receive commands.
5. Configure basic prober settings.
6. Set up measurement test plan.
7. Configure optical path settings.
8. Set up a test plan.
9. Execute test plan.

For more information, refer to the *Keysight Wafer Prober Plugin Help*.

Wafer Prober plugin ships with some example project files, wafer data files, element import files, element classes definition files, measurement plans, and test plan files, which can help you understand the plugin workflow better. These files can be accessed from the following location after the plugin has been installed:

C:\Program Files\Keysight\TAP8\Plugins\WaferProber\Examples

Known Issues

- Index values and IDs default to zero when creating new rows in the subdie or subdie element map (issue #15)

When creating new rows in the subdie and subdie element map, some fields will default to zero. To refresh these values to the correct values, please close the corresponding dialog and reopen it.

- Multiple error messages and exceptions shown when TAP is started without valid Wafer Prober Plugin license (issue #22)

When starting TAP without a valid Wafer Prober Plugin license installed on the PC, a number of errors and warnings will be shown in the TAP Log window (e.g. “Could not create an instance of ‘Wafer Under Test’: License required: N7700210C”). However, all messages relate to the missing Wafer Prober Plugin license N7700210C.

- Error message “Caught unhandled GUI error” after first creation of new TAP settings profile after TAP start (issue #28)

When creating a new TAP settings profile, the first time after starting TAP, an error message “Caught unhandled GUI error” will be shown in the TAP Log windows indicating that the creation did not finish successfully.

This issue can cause TAP to freeze when closing and restarting TAP directly after the unsuccessful profile creation. As a workaround, perform the following steps:

- To finalize the creation of the profile, close and reopen any TAP settings dialog (DUT, Instrument, Wafer Prober Settings). That will finalize the profile creation so it will be displayed correctly in the profile drop-down menu.
- If TAP does not start correctly any more due to the issue described above, please end the TAP process and delete the file “CurrentProfile” in folder C:\Program Files\Keysight\TAP8\Settings\Bench\”. TAP should then restart successfully.